

## REMARKS

In response to the Official Action mailed on June 8, 2007, the application has been amended. No new matter has been added. Reconsideration of the rejections of the claims is respectfully requested in view of the above amendments and the following remarks.

In paragraph 1 of the Official Action, claim 83 was objected to because of an informality. Specifically, the Examiner suggested that this claim would be improved in clarity by inserting the words "the contact portion" before "pivotably" in line 8. Claim 83 has been amended in a slightly different manner from that suggested by the Examiner but so as to achieve the same object of clarifying that "pivotably mounted" refers to the contact portion, thereby overcoming the objection. This amendment pertains solely to improving the readability of claim 83 and is unrelated to issues of patentability.

In paragraph 3 of the Official Action, claims 62, 63, 85, 90 - 93, and 95 - 102 were rejected under 35 USC 102(a) as unpatentable over Tygard (U.S. Patent No. 5,516,255) in view of Kawamura (U.S. Patent No. 3,796,332). This rejection is respectfully traversed.

The structures of the devices disclosed in the Tygard reference and Kawamura are as described on pages 11 and 12 of the

previous amendment filed on March 27, 2007. According to the Official Action, it would have been obvious to have modified the apparatus of the Tygard reference to utilize a four-bar linkage to control the angle of the contact portion of each clamping arm as taught by Kawamura "as this would be a more effective means of maintaining the arms at a constant angle and thus enabling the clamping arms to properly pick up loads of varying size".

This ground of rejection is not reasonable for the following reasons.

Firstly, there is no disclosure in the references to support the assertion that the four-bar linkage of Kawamura "would be a more effective means of maintaining the arms at a constant angle and thus enabling the clamping arms to properly pick up loads of varying size". Kawamura does not compare its structure with any other structures, and as set forth on page 12 and 13 of the amendment filed on March 27, 2007, there was no recognition in the relevant field of art (which is the field of handling layers of goods stacked atop pallets in warehouses) that the arrangement used in the Tygard reference of pivotably mounting a gripping pad at the lower end of a clamping arm was in any way unsatisfactory. See, for example, U.S. Patent No. 5,161,934 (Richardson), the first page of which was attached to the previous response, which uses the same manner of mounting gripping pads as in the Tygard reference. Thus, there is no teaching that the arrangement of Kawamura would be "a more effective means".

Secondly, although Kawamura discloses that its structure is able to move holding arms while always maintaining gripping claws horizontal by use of a parallel linkage, a person skilled in the technical field of the Tygard reference would not have found any relevance to this teaching, because there is no teaching in Kawamura of any problem associated with the operation of a conventional clamping apparatus for grasping a load of goods on a pallet. Furthermore, a person working in the field of the Tygard reference would not have considered the teachings of Kawamura to have any relevance to the specific field in which he was working, since Kawamura relates to "the transport operation of iron materials in either of the steel manufacturing plant or in the carrying out of timbers or iron ores from forest or mines and the like" (column 1, lines 21 - 24 of Kawamura). As such, there is no obvious relevance of Kawamura, which pertains to the handling of bulk cargo, to the field of the Tygard reference, which pertains to the handling of readily damageable items such as foods and beverages arranged in cartons in one or more layers on pallets.

As mentioned previously, Kawamura does state that the gripping claws on the holding arms are "maintained always in level position by the link mechanism of the parallelogram during closing and opening as gripping and releasing the cargo is performed", but there is no description in Kawamura of any significance of this feature, since Kawamura never says that there is any need for or advantage from keeping the gripping claws level.

As also previously noted, the primary goal of Kawamura is to enable the separation between two gripping claws on the same side of a load to be adjusted in accordance with the shape and size of the materials being gripped. For this purpose, Kawamura employs parallel linkage to enable two gripping claws on the same side of a load to swing towards or away from each other along the side of the load. The fact that the parallel linkages keep the gripping claws on opposite sides of a load level as they swing towards and away from each other is but a side effect and in no way a goal of Kawamura. In a device like that of the Tygard reference, in which there is only one contact portion on each side of a load, the principal reason in Kawamura for having parallel linkages (i.e., to adjust the separation between gripping claws on the same side of a load) is absent, so the parallel linkages of Kawamura have no obvious applicability to the device of the Tygard reference.

Page 5 of the Official Action refers to the passage in column 6, lines 43 - 45 of the Tygard reference which states that "Since the panels 40 are pivotable about pivot points 43, they can always remain parallel to the sides of the layer which is to be lifted". The Official Action interprets this as teaching the desirability of maintaining the gripping pads (the panels 40) in the Tygard reference parallel in order to pick up loads of varying size. The Official Action is reading too much meaning into that sentence. All this passage states is the desirability of having the gripping pads lie flat against a load; it does not

state that the gripping pads should maintain a constant angle as the clamping arms pivot. Suppose, for example, that different sides of a load were at different angles with respect to the vertical. The arrangement shown in the Tygard reference would maintain the panels 40 "always parallel to the sides of the layer which is to be lifted." The arrangement of Kawamura would not do so. Thus, modifying the Tygard reference to combine it with Kawamura in the manner proposed by the Official Action would negate one of the attributes of the Tygard apparatus without the references describing any benefit in doing so.

For the above reasons, a person skilled in the art would have found no motivation from the references to combine the Tygard reference and Kawamura as proposed by the Official Action. Therefore, the rejections of claims 62, 63, 85, 90 - 93, and 95 - 102 fail to set forth a *prima facie* case of obviousness. These claims are therefore allowable.

In regards to claim 92, the Official Action states that the angle of slope of the contact portion set forth in this claim "is an obvious design expediency based on the characteristics of the load to be handled". As set forth in the response filed on March 27, 2007, describing a feature as a "design expediency" does not automatically render that feature obvious. Since every feature of a claim is a result of a design by the inventor, the fact that a feature has been designed cannot render that feature obvious, for this would render every feature of a claim obvious. Whether

a feature is "expedient" also does not determine whether a feature is obvious, for if a feature were not expedient, there would be no reason for the feature to be part of an invention. Whether a feature is a matter of "design" or whether it is "expedient" is not the proper criterion for obviousness. The appropriate inquiry is whether the prior art cited by the Official Action teaches or suggests the recited feature.

As set forth on page 14 of the specification of the present application, when a load being grasped by a clamping apparatus according to the present invention comprises cases of beverages, sloping the inner surface of the contact portions 130 by 2 - 6° with respect to the side of the load enables the contact portions 130 to more effectively grasp the sides of the load. There is no teaching or suggestion in the cited references concerning such an advantage, so there is nothing in the references to motivate a person skilled in the art to modify the references so as to have the features set forth in claim 92. As such, the rejection of claim 92 does not set forth a *prima facie* case of obviousness. Claim 92 is therefore allowable.

It is to be noted that page 5 of the Official Action found it significant in connection with the rejection of claim 63, for example, that column 6, lines 43 - 45 of the Tygard reference state that "Since the panels 40 are pivotable about pivot points 43, they can always remain parallel to the sides of the layer which is to be lifted". However, regarding claim 92, the Official Action implies that it would be obvious for a person

skilled in the art to ignore this same passage in the Tygard reference and modify the angle of the panels 40 in the Tygard reference so as not to be parallel to the sides of a load. These two arguments in the Official Action are rather inconsistent with one another. If the Tygard reference is viewed as teaching the advantage of keeping the panels 40 parallel to the sides of load, it can only be viewed as teaching away from the arrangement set forth in claim 92. Thus, the cited references provide no support for the modification of the Tygard reference proposed by the Official Action.

The amendment filed on March 27, 2007 was accompanied by a Declaration Under 37 CFR 1.132 by the inventor describing the significant commercial success of the present invention and why that commercial success is attributable solely to the technical features set forth in the claims. The declaration also described the existence of a long-felt need for a device that could solve the problems of previously-existing clamping apparatuses and provide a clamping apparatus usable in the beer and grocery industries.

Page 6 of the Official Action states that the declaration was deficient in that

(a) there was no showing in the declaration that the objective evidence presented in the declaration was commensurate in scope with the claims,

(b) there was no showing in the declaration that others of

ordinary skill in the art were working on the problem and if so, for how long, and

(c) there was no evidence in the declaration that if persons skilled in the art who were presumably working on the problem knew of the teachings of the references cited in the official action, they would still be unable to solve the problem.

Regarding point (a), in order to remedy any possible deficiencies in the previous declaration concerning the nexus between the claimed invention and the products which have enjoyed commercial success, the applicant has prepared a supplemental declaration of commercial success, a copy of which is attached to this response, which describes the technical features of the commercial embodiments of the present invention more specifically.

Namely, the second full paragraph on page 2 of the new declaration describes the salient features of the structure of the commercial embodiments of the present invention, and the paragraph spanning pages 2 and 3 of the new declaration compares this structure with the structure of the commercial embodiments sold by the assignee of this application prior to the present invention.

In addition, the paragraph at the bottom of page 3 and the paragraph at the top of page 4 of the new declaration describe the change in the angle of the contact portions of the clamping arms as the separation between the contact portions changed with the old models of clamping apparatuses (page 3) and with the



commercial embodiments of the present invention (page 4).

From the descriptions on pages 2 - 4 of the new declaration, it is clear that the commercial embodiments of the present invention which have enjoyed significant commercial success include the feature of a four-bar linkage set forth in claims 62, 63, and 95 and included in claims 90 - 93 by their dependence from claim 62. It is also clear that the commercial embodiments satisfy the relationship between the change in the separation between opposing contact portions of two clamping arms and the maximum change in the angle of the contact portions with respect to the vertical set forth in claims 96 - 102. Thus, it is believed clear from the new declaration that the evidence of commercial success provided in the first declaration is commensurate in scope with the claims.

In the previous declaration, the applicant set forth evidence that the significant commercial success of the present invention is not due to advertising, a large sales force, market power, or undercutting the price of the competition. Page 5 of the new declaration further compares the size, weight, lifting capacity, operating speed, and price of the old models of a clamping apparatus sold by the applicant and the new models according to the present invention and shows that the much greater commercial success of the new models is not due to factors (size, weight, etc.) unrelated to the novel technical features set forth in the claims of the present application.

The new declaration by the applicant further includes two declarations in the form of letters from customers who have purchased and are now using the clamping apparatus according to the present invention. One letter is from G & J Pepsi-Cola Bottlers, Inc., which is a major distributor of Pepsi products, and the other letter is from Giant Eagle, Inc. which is a supermarket and convenience store chain operating primarily in Pennsylvania, Ohio, West Virginia, and Maryland. Each of these declarations identifies problems with previously existing clamping apparatus and how specific technical features of clamping apparatuses according to the present invention overcame those problems.

The declaration from G & J Pepsi-Cola includes the following factual showings:

- G & J Pepsi-Cola used an old design of a clamping apparatus developed by the applicant from 1997 until 2004.
- Although the old design was superior to unloading pallets by hand, it still had problems with respect to gouging and pinching of products, particularly of fridge packs.
- There was a clear need for an improved clamping apparatus that would produce less product damage.
- In 2004, they were introduced to the new design of a clamping apparatus according to the present invention.
- They found that the new design completely overcame the problems of the old design by using a four-bar linkage to

control the angle of gripping pads.

- Although the clamping apparatuses of the old design which G & J Pepsi-Cola owned were still fully functional, they scrapped all their old clamping apparatuses and replaced them with four units of the new design according to the present invention. In addition, they purchased six additional units of the new design.

The declaration from Giant Eagle includes the following facts:

- Some years before the present invention, the applicant lent Giant Eagle a clamping apparatus of the design being sold at that time for use on a trial basis. (As stated in the new declaration from the applicant, the applicant recalls that the loan probably occurred in around 2000).

- The clamping apparatus of the old design had cost advantages over a lumper service, but the clamping apparatus produced an unacceptable amount of product damage due to stabbing or pinching.

- The old design also had the problem that it could potentially drop a load.

- For these reasons, Giant Eagle decided not to purchase any clamping apparatus.

- In 2003, Giant Eagle tried the new design of a clamping apparatus according to the present invention having a four-link mechanism for controlling the angle of the clamp pads.

- The new design did not stab or pinch products in a load or slip against a load.

- The new design completely solved the problems of previously-existing clamping apparatuses. As a result, Giant Eagle purchased two units of the new design for their warehouse.

- The new clamping apparatus according to the present invention has increased operating efficiency while eliminating product damage.

Thus, the new declaration by the applicant along with the declarations from G & J Pepsi-Cola and Giant Eagle make it clear that the reasons for the commercial success of the applicant's clamping apparatuses according to the present invention are technical features of the clamping apparatus described in the claims of the present application and not unrelated factors.

Regarding point (b), the new declaration by the applicant demonstrates, by reference to U.S. Patent No. 4,252,496, that as far back as 1976, those skilled in the art were endeavoring to build a clamping apparatus capable of being used by the beer industry. As also stated in the previous declaration of March 27, 2007, prior to the present invention, others in the field had attempted to develop clamping apparatuses in the same field which grasped and released a load by sliding L-shaped arms in and out along a straight line (see, for example, U.S. Patent No. 6,135,704, entitled "Layer-Picking Clamp Supported on a Forklift

Truck" and based on an application filed in 1997), but that these designs have been unsuccessful due to weight problems and the need for constant repairs due to the inherent drawbacks of L-shaped arms. As a result, as set forth in previous declaration, prior to the present invention, no one had developed a clamping apparatus which was acceptable to either the beer or grocery industries.

Further evidence of attempts by those skilled in the art from well in the past to build a clamping apparatus suitable for the beer industry can be found in above-mentioned U.S. Patent No. 5,161,934 (Richardson), entitled "Apparatus for Handling Packaged Bottles, Cans, or the Like" and based on a U.S. patent application filed in 1990, which was in turn based on a U.K. patent application filed in 1989.

Much of the description in that patent relates to handling of cases of bottled beer, but column 9, line 36 - column 10, line 10 discuss using the invention of that patent for handling cases of canned goods, including cases of beer in cardboard trays (column 9, lines 44 - 45).

Thus, well prior to the prevent invention, there was a strong interest in the art in developing a clamping apparatus for use in the beer industry as well as for handling canned goods. However, as stated above, efforts to develop such a device were unsuccessful, as evidenced by the fact that prior to the present invention, no clamping apparatus was accepted by the beer or

grocery industries.

Evidence that others skilled in the art were aware of problems of clamping apparatuses existing before the present invention and trying for a significant length of time to overcome those problems is found in above-mentioned U.S. Patent No. 6,135,704, which in column 1, lines 58 - 65 states that clamping apparatuses of the type having "downwardly pivoting arms" have problems with respect to damaging force concentrations and poor gripping. The inventor of that patent tried to remedy the problem by doing away with "downwardly pivoting arms" and replacing them with sliding L-shaped arms, but as noted above, that has not been a satisfactory solution.

Regarding point (c), it is respectfully submitted that there is no requirement that a declaration concerning long-felt need provide evidence that "if persons skilled in the art who were presumably working on the problem knew of the teachings of the references cited in the official action, they would still be unable to solve the problem." Although page 6 of the Official Action cites MPEP 716.04 as a basis for this requirement, the MPEP does not appear to support this assertion. According to MPEP 716.04, in order to establish a long-felt need, it is necessary to provide objective evidence that an art-recognized problem existed for a long period of time without solution, that the long-felt need was not satisfied by another before the invention by the applicant, and that the applicant's invention in

fact satisfied the long-felt need. All three of these requirements are satisfied by the declarations attached to this response, so it is believed that the applicant has satisfactorily demonstrated a persistent long-felt need first satisfied by the present invention.

In summary, it is believed that the new declarations attached to this response, considered in conjunction with the evidence of commercial success set forth in the previous declaration, provide ample objective evidence that the present invention is not obvious and that all the pending claims should be allowed.

Claim 83 was allowed, subject to correction of the informality mentioned above, and claims 64, 75, 76, and 94 were objected to as depending upon a rejected base claim (claim 62). For the reasons given above, it is believed that claim 62 is allowable. Claims 64, 75, 76, and 94 are therefore allowable as depending from claim 62.

New claim 103 describes additional features of the present invention. This claim is allowable as depending from claim 62.

In light of the foregoing remarks, it is believed that the

present application is in condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,



Michael Tobias  
Registration Number 32,948  
Customer No. 27649

1629 K Street, N.W., Suite 300  
Washington, D.C. 20006  
Telephone: (301) 571-0052  
Facsimile: (301) 571-0069  
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Attachments:

declaration under 37 CFR 1.132 by Ed Tygard  
declaration by G & J Pepsi-Cola Bottlers, Inc.  
declaration by Giant Eagle, Inc.